Attachment B

(Report to the 77th Texas Legislature on the Availability of Advanced Services in Rural and High Cost Areas – Chapter 6: Potential Policy Solutions)

CHAPTER 6: POTENTIAL POLICY SOLUTIONS[142]

> "Public policy to close the digital divide should build human capital by giving people the capital skills to use the information age technologies, the experience to make them comfortable with these technologies and the resources to obtain the necessary hardware at home, where they conduct their daily activities."
>
> -- Marc N. Cooper, Consumer Federation of America

Meeting State and Federal Policy Goals for Advanced Services

Both Congress and the Legislature have recognized the importance of access to advanced telecommunications services. In Section 706 of the Federal Telecommunications Act, Congress requires that advanced telecommunications capability be deployed to all Americans on a reasonable and timely basis. Similarly, Section 51.001(g) of the Public Utility Regulatory Act enunciates Texas' policy that all regions of the state, including low-income customers and customers in rural and high cost regions, have "reasonably comparable" access to advanced telecommunications services.

These sections make clear that the ultimate policy objective is universal broadband access for all citizens within a reasonable time period. Indeed, some jurisdictions have begun to establish a date certain for achieving ubiquitous broadband access. In Iowa, for example, the recently released Iowa 2010 Strategic Plan established 2005 as the goal for all Iowans to have access to advanced telecommunications services and 2010 as the goal to electronically connect all Iowans to each other and the world.[143]

Additionally, the State of North Carolina has entered a "social contract" with BellSouth, Sprint and Verizon.[144] These companies have agreed to work with ISPs, telephone cooperatives, state government, and others in the communications industry to provide affordable, high-speed Internet access to all areas of the state within three years. They will provide local dial-up Internet access from every telephone exchange within one year.

Similarly, Texas should establish a goal that all Texans have access to advanced services by a date certain. Importantly, this access should be affordable and service

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[142] Numerous state and federal policies and programs that affect the deployment of advanced services in rural and high cost areas of Texas have already been implemented. *See* Appendix N of this Report for a discussion of current state and federal policies or programs.

[143] Governor's Stragetic Planning Council, IOWA: THE STATE OF THE FUTURE 2010 at 13 (Nov. 2000) < http://www.iowa2010.state.ia.us/library/finalreport/finalreport.htm>.

[144] North Carolina, Office of the Governor, BRIDGING THE DIGITAL DIVIDE IN NORTH CAROLINA <http://www.governor.state.nc.us/news/releases/DigitalDivide.htm>.

should be reliable, easy to use, robust, and scaleable to growing needs and uses. Finally, it must remain flexible enough to adapt to next generation technological advances.

Issues in Meeting State and Federal Policy Goals for Broadband Access

As this Report has shown, there are many encouraging signs that competition and technology are driving broadband deployment, particularly in urban parts of the State. Telecommunications carriers, cable companies, wireless providers, and satellite companies are all making large investments across the state to provide access to advanced telecommunications capabilities. At the same time, the state is at an early stage of technology adoption with current penetration levels for broadband remaining relatively low.

This Report has also highlighted several emerging issues indicating that some regions of the state and certain customers may be not be receiving reasonably comparable access to advanced telecommunications services. These issues are:

- Cost and availability of "middle mile" connectivity in rural areas.
- Lack of widespread deployment of "last mile" broadband connections in rural areas.
- Lower usage of computers and the Internet by certain groups of Texans, particularly "at risk" populations, in both rural and low-income areas.

This Report has described why access to advanced telecommunications services is important for maintaining the economic viability of rural communities and for obtaining access to vital community services, such as health care and education. If the Legislature believes that certain communities and individuals are being left behind, then the state should adopt public policies to address these issues.

The next section offers policy objectives and recommendations that the Legislature may wish to consider in implementing the state's policy "to ensure that customers in all regions of this state, including low-income customers and customers in rural and high cost areas, have access to telecommunications and information services, including…cable services, wireless services, and advanced telecommunications and information services." This section first suggests overall policy objectives that the Legislature should adopt and then discusses specific policy alternatives that the Legislature may consider.

PUBLIC POLICY OBJECTIVES

The following tenets are important for developing an overall framework for supporting advanced services deployment in rural Texas.

TECHNOLOGY NEUTRALITY

Rural Texas is not only vast but has varying geography and levels of wealth. Consequently, an advanced services technology or service that is well suited for one region might be inappropriate for another. Even when geographic similarities exist, demographic characteristics like population density and income level may affect the cost of deployment. To meet these challenges, advanced services providers are experimenting with a variety of technologies to reach "end-use" customers.

Therefore, it is important to encourage the deployment of advanced services to rural Texans in a technology neutral and cost-effective manner. In this rapidly changing, dynamic environment, it is too early to declare a particular technology or service the winner. Consequently, any public policy adopted at the State level should encourage advanced services deployment without reference to any specific technology.

AVOIDANCE OF EXCESSIVE REGULATION

Potential policy solutions for encouraging deployment in rural areas require creativity, innovation, and simplicity. Currently, unregulated companies or unregulated affiliates of regulated entities provide most broadband services. Further, regulating these entities or requiring them to provide broadband services to specific rural areas could hamper innovation and competition. Consequently, to the extent the Legislature desires to speed-up the wide scale deployment of advanced services, incentives could be used rather than regulation. However, if regulation is necessary, it should be the least intrusive means available.

ENCOURAGING LOCAL SOLUTIONS

Public policies that are pro-competition and pro-investment should encourage deployment of advanced services to rural areas. Additionally, policies that encourage these solutions at the local level are more likely to result in the efficient use of resources and better meet the needs of rural communities.

For instance, while the overall data shows that broadband deployment is occurring at a much faster pace in urban areas, there are examples of rural communities that have obtained advanced services via innovative market-based thinking. Consequently, the Legislature should encourage local solutions and the sharing of "best practices" among rural communities in Texas and other states.

AVOIDING "ONE SIZE FITS ALL" SOLUTIONS

One-Size-Fits-All policies are unlikely to achieve widespread success. The differing capabilities of various broadband technologies guarantee that one particular technology or set of market players may not provide the best answer in all locations and circumstances. For example, consumers in remote areas may be more cost-effectively served by wireless and satellite services than by existing telecommunications or cable infrastructure.

Moreover, differing economic and demographic characteristics in various communities may require different policy solutions. Developing a "tool kit" approach that allows communities to select the program that best fits the need may be the most effective policy solution.

Specific Policy Alternatives to Encourage Deployment

In this section, specific policy alternatives to encourage advanced services deployment in rural areas are explored.

EXPANDED DATA COLLECTION ACTIVITIES

Pennsylvania and Georgia have recently developed Internet-based comprehensive telecommunications facility inventories.[145] These inventories have been useful both in identifying those parts of the state lacking telecommunications facilities and for use by economic development officials and others in site selection decisions. While carriers were initially reluctant to provide data, they have found these tools useful in better understanding telecommunications deployment.

DEMAND AGGREGATION

Demand aggregation is a concept that is based on the simple premise that the sum of the parts is more valuable than the parts themselves. In demand aggregation, several small customers who desire broadband services join together and hold themselves out to a provider as a single customer that is large enough to warrant private investment in providing the service. This group may consist of local school districts, local government entities, small businesses, and individual residents. Once this group reaches critical mass, they become an attractive business opportunity to an advanced services provider.

The approach has worked. For instance, in Stanly County, North Carolina, the local school district, library, hospital, and community college banded together through demand aggregation to bring high-speed access to their rural community.[146]

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[145] *See* Georgia's map <http:/maps.gis.gatech.edu/telecomweb/index.html> and Pennsylvania's map <http://guoray.ist.psu.edu/info/Publications/ESRI_P147.htm>.

[146] William Wright, *Overcoming Barriers to Rural Access: Policy Recommendations* (visited Nov. 8, 2000) <http://www.itc.org/aaron/archive/current/msg00079.html>.

Berkshire Connect, a consortium of private companies, government officials and nonprofit organizations, is one of the best-known demand aggregation success stories. Businesses in rural Western Massachusetts faced high costs for telecommunications services due to the lack of a community point of presence.[147] In response to this problem citizens formed a consortium with state backing to measure the demand for services, assess potential technology solutions, and develop an economically viable business plan to attract a new advanced services provider to the region. Massachusetts provided $1.5 million in funding for the initial needs assessment and additional capital expenditures.

Demand aggregation creates a win-win situation for the rural resident and the advanced services provider. While individual customers in a rural area may not justify the investment necessary to bring advanced services to a rural area, demand aggregation creates a level of certainty for providers that an investment can be profitable. Conversely, rural communities, by projecting the aggregate demand of their customer base, increase their buying clout and gain collective bargaining power.

Importantly, demand aggregation creates an incentive for deployment of advanced services infrastructure in areas that otherwise would be overlooked. Consequently, demand aggregation may be a policy worth considering for the deployment of advanced telecommunications services to rural areas.

ANCHOR TENANCY

Anchor tenancy follows the demand aggregation concept, but utilizes large consumers of telecommunications services (such as local government, schools and libraries) to guarantee a certain level of consumption, thus mitigating the risk of making the relatively high fixed investment.

Once the fixed investment is made, the incremental cost associated with serving additional businesses and individuals is relatively low, thus increasing the penetration of advanced services to communities while maintaining profitability.

Colorado's Beanpole Project (HB 99-1102), enacted in the 1999 session, provides an example of anchor tenancy. Under the "Beanpole Project," public sector users pool buying power to provide market incentives to private providers to set up a multitude of local Network Access Points. In this way private providers are guaranteed sufficient return to mitigate risking the relatively high fixed costs of locating this facility in under-served areas. Once the Network Access Point is located in the community to serve these "guaranteed" customers, the incremental cost to add additional individuals and businesses to the network is relatively small, thus an increase in broadband diffusion is

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[147] Louise Finckel, *The Road Less Traveled*, CIO MAGAZINE (Oct. 15, 2000) <http://www.cio.com/archive/101500_road.html>.

possible. A total of $4.6 million was appropriated to assist local communities in accomplishing this in Colorado.

The concept behind the Beanpole Project is similar to the Texas General Services Commission's Texas Telecommunications Infrastructure Gateway (TTIG). The TTIG project, currently being piloted in four sites, seeks to push technology and Network Access Points further into communities.[148] While currently unfunded, GSC has long range plans to roll out services to 50 sites.

ENCOURAGE COMMUNITY NETWORKS

The recent Community Network Initiatives undertaken by the TIF could be expanded. During the first round, the TIF Board funded 36 proposals for community networks. While the details of each network differed, each proposal was required to have public access, training, local content and ability to demonstrate long term sustainability.

These community networks allow broad community participation and appear to have been successful in bringing advanced telecommunications services to the communities they serve. These initiatives could be expanded, and participation by other than existing TIF stakeholders (schools, libraries, hospitals, and universities) could be encouraged.

PROVIDE COMMUNITY INTERNET ACCESS AND TRAINING TO "AT RISK" POPULATIONS

The state could establish and fund public/private partnerships to develop Community Technology Centers (CTC). These CTCs provide individuals in under-served inner cities and rural areas with access to computers, technology literacy training and the Internet. For example, Florida has entered into a partnership with Virginia based non-profit PowerUP to link communities to computers and information technology. PowerUP provides computers, software, technical support and staff training. Private corporate sponsors provide infrastructure. The State funds other program costs.[149]

USE ECONOMIC DEVELOPMENT FUNDS FOR RURAL TELECOMMUNICATIONS INFRASTRUCTURE INVESTMENT

The state could use existing or new economic development funding specifically for the purposes of enhancing telecommunications infrastructure. Existing funding

[148] For more information on the Texas Telecommunications Infrasturture Gateway, *see* <www.ttig.state.tx.us>.

[149] The "PowerUP Florida" partnership is currently composed of the Governor's Office, industry leaders, non-profit community groups, the Searcy Foundation, Florida A&M University's Institute on Urban Policy and Commerce, and the national PowerUP Inc. Senate Bill 406 provides $500,000 through Florida A&M's institute to help fund the project. Among those companies partnering in the Florida initiative include: Intermedia Communications, AT&T, Universal Studios, Maxcess, Forrester Research, Verizon, Time Warner, MasTech, Cenetec, Gulf Power, and Semtor.

mechanisms for economic development include state sales tax adder programs ("4A/4B" programs) and Community Development Block Grants. Making minor changes to existing programs may allow the funds to more easily be used for telecommunications infrastructure given that the infrastructure is appropriate for economic development.

Similarly, the Texas Agricultural Finance Authority ("TAFA") could be used to make loans to rural telecommunications projects. TAFA provides financial assistance to creditworthy individuals and businesses in partnership with banks or other agricultural lending institutions through six programs to eligible agricultural businesses.

PROVIDE TAX INCENTIVES FOR DEPLOYMENT

The state could provide tax relief in some form for companies that agree to provide or that are currently providing advanced services in rural areas. For example, the Comptroller has proposed a refund of the sales and use taxes that companies pay on items used to bring advanced services infrastructure to rural areas; and, telecommunications companies being eligible for a franchise tax credit for advanced services infrastructure investments outside the state's metropolitan areas.[150]

DEPLOY FIBER OPTIC CABLES IN THE STATE'S RIGHTS OF WAY

The state could adopt a policy that that allows the state to contract with a private advanced services provider to install and maintain a public/private fiber optic network along the state's highway rights of way. This network would lease capacity in a non-discriminatory fashion to providers. For example, Florida's Department of Transportation and Department of Management Services entered into a contract with Florida Fiber Networks for a 99-year build, operation, and maintenance arrangement. This fiber network will provide broadband capacity to rural and urban areas.[151]

[150] Russell Gold, *Tax Proposal Seeks Wider Web Access*, WALL STREET JOURNAL at T1 (Nov. 1, 2000).

[151] Kim Sunderland, *Florida Regulators, Industry Spread Broadband Plan*, PHONE PLUS MAGAZINE at 36 (Oct. 1, 2000).

ALLOW PRIVATE ACCESS IN LIMITED SITUATIONS TO THE TEX-AN 2000 INFRASTRUCTURE

The state could allow private access to the TEX-AN 2000 system in rural areas in limited situations. This access would only be allowed where specific criteria are met, the market has failed to provide an advanced services solution, and the community or private entity agrees to bear a portion of the infrastructures cost. For example, private access may only be afforded to private entities in communities of 5,000 or fewer residents upon a demonstration by the community that demand aggregation and/or anchor tenancy has failed, that an economic benefit is attainable, and the private entity commits to bear a portion of the infrastructure costs.

PROVIDE A NARROW EXCEPTION FOR RURAL MUNICIPAL GOVERNMENTS TO PROVIDE ADVANCED SERVICES

Similarly, the state could create a narrow exception to PURA § 54.202 that would allow rural municipal governments to build their own telecommunications infrastructure and provide advanced services. This alternative would only be available if local efforts to aggregate demand fail or the serving ILEC fails to provide advanced services within a specific amount of time of a specified number of bona fide requests for such service. Currently state law prohibits municipal authorities and local governments from operating as telecommunications companies in Texas.[152] Consequently, in a rural area if the ILEC does not initiate rollout of advanced services, rural residents may be challenged to find an alternative provider.

ENHANCE STATEWIDE TELECOMMUNICATIONS STRATEGIC PLANNING

The state could enhance statewide telecommunications planning. Currently, multiple state agencies share responsibility for various aspects of telecommunications and/or advanced services planning. The PUC has responsibility for regulatory and policy issues, the General Services Commission has responsibility for the state network, the Department of Information Resources oversees state information technology resources, the Comptroller's office is implementing an e-government initiative to move government information online, and the TIF Board issues grants to eligible recipients.

A more coordinated approach to addressing state advanced services policy issues may be required to ensure that advanced telecommunications services reach all Texans. While coordination could be done through informal interagency staff meetings and policy discussions, or through a more formal mechanism, the state could assign one state agency the authority necessary to coordinate planning for deploying advanced services. Affixing accountability to one agency should provide a more focused and efficient effort.

[152] PURA § 54.202.

In determining accountability, the state may also want to adopt easily verifiable performance measures. By developing measurable goals the state could assure that a policy objective, such as obtaining universal broadband access by a date certain is met. The PUC has recently implemented an internal performance measure for broadband access. Other states, such as Iowa, have implemented a broad set of objective measurements to ensure that the state meets its policy objective of universal access.[153]

[153] Governor's Stragetic Planning Council, IOWA: THE STATE OF THE FUTURE 2010 at 16.